ANT/GRA/04

ARCTICA

GRANGER

R.C.M. 1970

0011

Book 2.

Loc. 247 –
351

INDEX

Page	Subject
1 – 13	~~Bracy Peaks~~ Mt. Seaton Area
14 – 18	Rookery Is. age det.
19 – 22	Mt. Burnett age det.
23 – 32	Scullin Monolith area
33 – 34.	Depot Peak area

N.B. all bearings magnetic.

SAT

[illegible] BERNER LAKE

[illegible] - 30 [illegible] ANIT 44 Run 24. 9202 K.

[illegible]

297. [illegible]

[illegible] 310-320

[illegible]

[illegible] 330°

4358/1578

[illegible]

4360/1635

298. [illegible]

[illegible]

[illegible]

4563/1627

299 On hill the dominant float is and py. g's felt granite seen ± garnet. Also seen and is ± py. granulite, mafic

south 4364/1629

300 [illegible]

[illegible]

south

[illegible]

301 - 306 Photo AU 27 [illegible] 67185

301 Prominent [illegible]

[illegible]

4364/1625

[illegible]

[illegible] account [illegible] of the
[illegible] specimens. But mostly rather numerous
sample 301. Minor equivalent, shows.

4363/1624

[illegible]) Mos [illegible] well [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
to be [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[

4364/625

~~Sample~~ ?

Sample 304 (as 279)

[illegible]

[illegible] 4362/1616

[illegible]

acid [illegible] 4302/[illegible]

Sample 306

lenses

(~~[illegible]~~)

(Similar to 297 but lens [illegible])

5

[illegible]

(Similar to 301 but more [illegible]

[illegible]

Red and [illegible] for camp

(308) Discard [illegible] for hill 303 [illegible]
and [illegible] hill 303 $\boxed{4375/622}$
Red and dark [illegible] [illegible]

1/100,000 SR 42-43/9 C BEAVER LAKE

SUNDAY 2nd FEB 1970

All points marked on photo A15T 94 Run 4C L7183

Traverse with from camp across creek to northern run overlooking Diamond Island and Whale Mountain. Step with following features

WC 309 Kt low point on ridge 4351/1660

Flat coarse grained and granulite [illegible] v. minor pyrite. Blue-grey [illegible] yellowish [illegible] feldspars. Note weathers red-brown. Sample 309

Poor foliation due to [illegible] of feldspars. 050 [illegible] sample [illegible]

Strongly jointed, slabby, craggy o/c block 1-2m [illegible] 70°, 0°

Contains bands and lenses of streaky [illegible] dark f. grained biotite-rich [illegible] gneiss. Schlieren [illegible] usually [illegible] than [illegible] Sample 310

occasional

Narrow quartz veins [illegible] 050

Various varieties of 309 due to [illegible] differences in [illegible] in [illegible]. Some peg [illegible] [illegible]

7

[illegible] a few [illegible] and veins
[illegible] [illegible] distance. [illegible] appear
to be [illegible] folding & [illegible] in the formation
[illegible] similar in [illegible] to loc. 279 & 302

same coordinates as for 302

loc. 311 50' along ridge to east variants of 310
become dominant and form a migmatite complex
with veins [illegible] felsic rock. [illegible] diffuse
patches and lenses of acid material. Most veins
are 0.5m or less [illegible] and are approx. conformable
but diffuse patches of acid material are irregular
with the streaky [illegible] [illegible]

Photos

Several boudinage structures and small [illegible]
folds. Many veins have mafic selvages. Usually
veins coarse grained to pegmatitic

[illegible] 350 p50-60

Sample 311 of coarse grained granitic material
from one of veins

A few [illegible] small lenses of mafic
[illegible] material

Some development of feldspars and augen gneiss
variants of 310.

[illegible] appear

in parcels

+355/1663

Loc 312 Highest point of ridge is composed of grey and light and weathering granite gneiss and garnet Sample 312. A few pegmatitic bands comprising 5-10 cm thick. Streaks of rusty maple green and a few minor bands [illegible] of pyrrhotite. Some development of feld porphyroblasts up to 5 cm. Massive o/c.

Fol 155 Foliation 25°×90°

Nearby the granite gneiss veins up to 10 cm thick of f-m garnet pyroxene gneiss (30% mafics) diffuse margins. But minor development of streaks of mafics with stringers 1" margins. Sample 313

Major strike direction is 115°

Weathers grey green colour. Fresh is shiny grey green. Some veins and weathering.

At least 5 cm thick veins [illegible] appear to display some of banding with the granite gneiss

Locality 12

6'

m for 312

~~loc 314~~ Up ridge near summit similar rock type to 312 also granulites as 309 [illegible] Flow development of pegmatite veins and many irregular pockets and veinlets of [illegible] pegmatite

Artificial development for rocks at loc 312. Similarity - few veins of 312 also [illegible] bleb gy veins

[illegible]

Also at loc 314 [illegible] Sample 314 [illegible]

Descend scree to gully slope on [illegible] of ridge. Traverse [illegible] variety of granite [illegible] Minor mafic [illegible]

4368/1609

~~Near~~ N [illegible] ridge [illegible] high point

loc 315 Massive gyl [illegible] gy 3 feldspar granite gneiss med. [illegible] up to 3cms [illegible] feldspar 1cm

[illegible] by [illegible] of [illegible] [illegible]
in field [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] Massive [illegible] Joints 0° & 90°
[illegible] several metres Red [illegible] weathering
[illegible] several metres [illegible] [illegible]
more [illegible] acid granulitic [illegible]
[illegible]. [illegible]

Sample 315 [illegible] by [illegible] field granite [illegible]
as 292 [illegible]

[illegible] [illegible] [illegible] [illegible] [illegible]
no garnet. 4373/1672

(316) In saddle [illegible] [illegible] mafic granulite
and also float [illegible] [illegible] [illegible] [illegible]
(capping [illegible] 5 [illegible]). At least 15 [illegible]
Sample 316. [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
Also minor float of [illegible] [illegible]

[illegible] [illegible] [illegible] [illegible]
[illegible] mafic [illegible] [illegible] [illegible] [illegible]

Pebble ~~4373/1672~~ 4378/1675

(317) At "[illegible]" [illegible] [illegible]
massive [illegible] [illegible] [illegible] (bi) [illegible]
[illegible]

50-60° in mafics. ~~[illegible]~~ foliated - streaks of mafics. Sample No. 317; similar, 279

[5] 330° lik. Joints 310°, 50° in longitudes. Joints prominent massive blocky tor o/c blocks above 2m. Several large chimney stones

Photos

38

WED 25th FEBRUARY 1964 Norm SQ40-41/15

Rooking I Are det. samples by Hanging

All samples 4788/5001

Sample 318 [illegible] Mafic sheets give [illegible] 50-55°. [illegible] Massive o/c. [illegible] at 50° [illegible] 50° flat [illegible] long [illegible] o/c. [illegible] 75m [illegible]

Drilled In [illegible] Sample [illegible] mafic [illegible] 5 mm [illegible] 4m [illegible] 55° [illegible]

Minor [illegible] in sample 318

Sample point about 15m S. of [illegible] Sample 319 .222

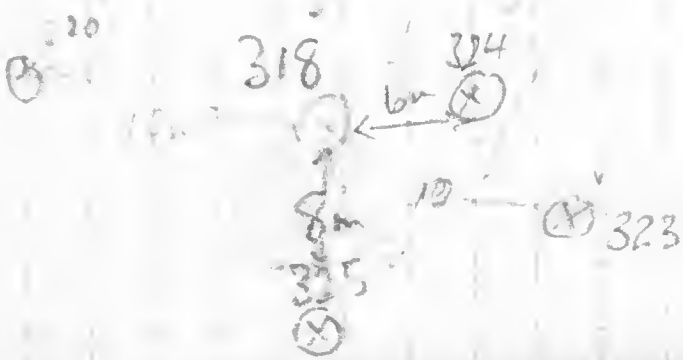
Sample 319 200m NNE [illegible] 318

Even [illegible] similar to sample 318 Sheeted [illegible] 55°

[illegible] o/c [illegible]

Sample [illegible]

[illegible]


318
324
323

Sample 320 [illegible] 10 m. west from 319
[illegible] seamed chamosite in 318
319. Strongly foliated. 55°

It has the [illegible] of [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]

[illegible] [illegible] [illegible] [illegible]
less than 1 cm wide are present to
[illegible] of sample [illegible] appears to be
11 foliation [illegible]
[illegible]
Does it fit [illegible] of shear? [illegible]
[illegible] shear [illegible] foliation to [illegible]

Sample 321 50m [illegible] to 318
Massive [illegible] [illegible] [illegible]
chamosite [illegible] [illegible]
streaks [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]

) the sample point.
Maps in Chain 10m × 1.5m pressure
S. [illegible] sample pt. [illegible] ground
geometric rather [illegible]
[illegible]
[illegible] Blocky s/c

*[NB. did not collect sample 324]

Sample 322 [12m NW for 321]

[illegible] ground [illegible] ground
chamosite [illegible]
Streaky [illegible] at 318, 319 etc
[illegible] more irregular
[illegible] appear
[illegible] 30% of rock
[illegible] 55-60°

One [illegible] (1cm) showed
the [illegible] (pink feld. [illegible]
(pink feld. [illegible]) [illegible]
[illegible] the more [illegible]
feldspars rich [illegible] of the chamosite
are [illegible]
[illegible] 340° : 65° ~ almost flat

gray black 2-3 in. [illegible]

Sample 323 *(Hammer sample)
12 ft. ESE from 318
Granite Shirley, red-cross granite
Chamberlain on 318.
No inclusions or mafic [illegible] in
[illegible]
Shirley [illegible] to be small mafic
[illegible] and small patches of pink field
[illegible] coarse grained

Sample 324 *(Hammer sample)

[illegible] for 318, red-cross granite
[illegible] granite Chamberlain Shirley on
318.

Below 323 and 318 several different
irregular [illegible] veins and patches of
pink [illegible] granite to [illegible]
[illegible] the [illegible] [illegible]

garnet rock. Gt. porph. 2-3 cm
veins → 10cm wide, several in
a [illegible]. Also darker, lower
[illegible] veins [illegible] length, [illegible] strike and
[illegible] dip.

Sample 375 2m south from 318
Blocky [illegible].
Upper [illegible], strike from 318
similar streaky chamosite, contains
small [illegible] patches & streaks of
pink feldspar rock not less than 50%
Primary feld porph. → 1cm esp. in the
pink feldspar patches.

Long gullies 1' strike and X cutting
are probably shears. [illegible]
to be too important structures.

THURSDAY 26th FEB 1970

Mason SQ 40-41/15

Mt. Burnett area. Age det. sample about 100m abv ridge south from col S of Mt Burnett.

Sample 326 326-330 : 4595/4690

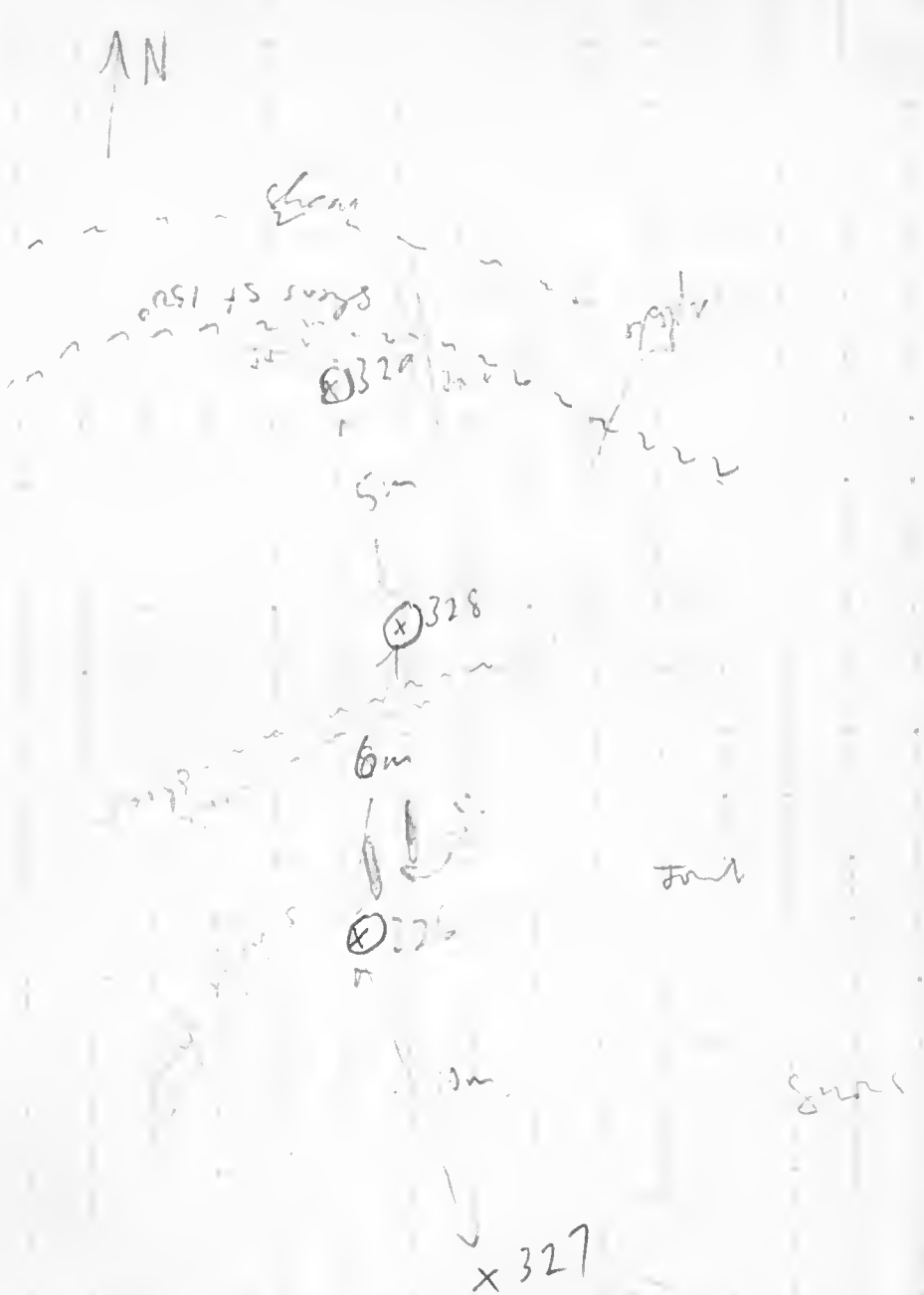
Coarse grained Charnockite. Slightly porphyroblastic feldspars up to 2 cms. different from the Rookery Island coarse grained charnockite but not similar to the Mason purple charnockite. Orthoclase dominant feldsp. More granitic in texture & comp. ie feldspars are usually white or pale red/brown cf. Mason purple feldspars.

Does not appear to be any alignment of feldspars or any gneissic texture.

Nameless O/C.

Major joints 155°. Minor joints at about 55°. ↳ foliation marked.

Inclusions not common near 326 but ~~occasional~~ small 20 cm x 10 cm pyroxenite fragments in chunks trend of approx 60°. 2m from sample pt. Diffuse boundaries


N
329
5m
328
6m
3m
x 327

5m. east of sample pt area of large feld porphyry 3-4 cm length elongated at approx 60° over area of 2-3 m. = 52

Occasional diffuse pinkish segregations of feldspar elongated approx 30°

Minor accompanying shears black, 11' magnetite points and dating points. None with relevant strike of 326. Shears dip shallower.

Also minor shears 2m to west of sample pt trend dip about 260°

White vein strike 215° 6-8 cm wide extends for at least 20 m. hosted by east of sample pt. Vein is filled with Chlorite feld. constituents

Sample 326 V. fractured some minor textural of

Samples 327, 328, 329 all similar massive coarse grained Chlorite some feld. porphyry → zone

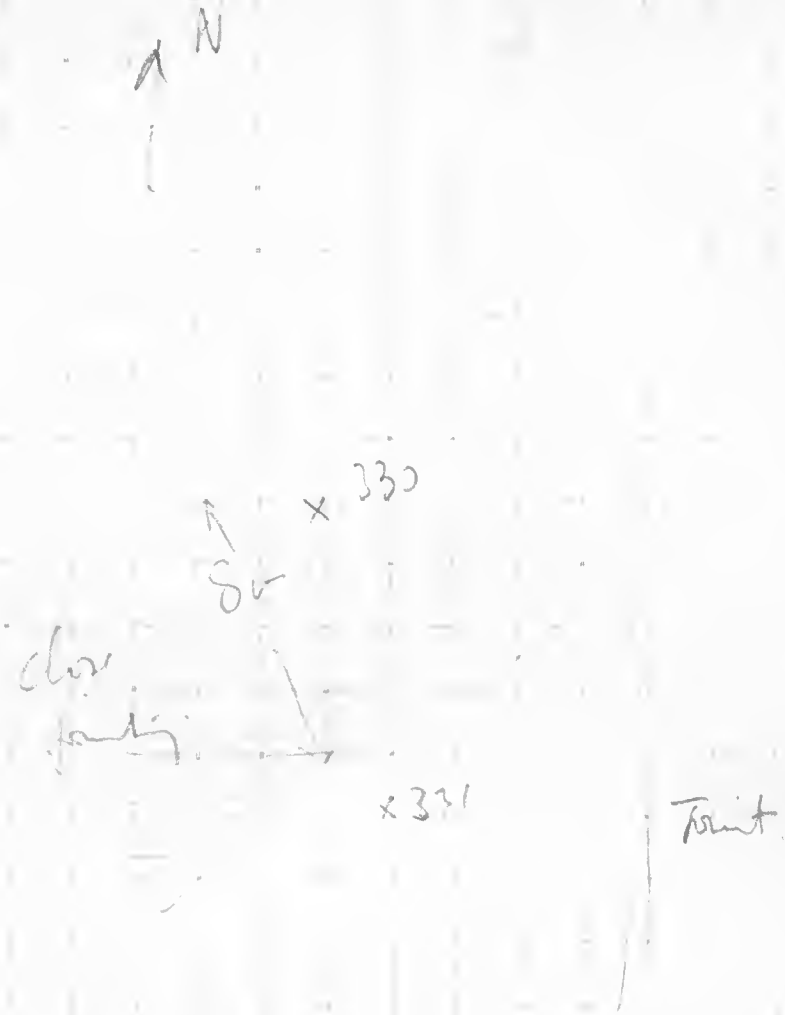
Sample 329 Minor to weathering of feld

Sample 328 Weathering also fractures

White deposit in fractures NSV v. good sample

327. Unsuccessful blasting. No sample

20


N
330
80
clear
331
Point

Sample location 330

Approx 75 m north along ridge from 326 - 329
Fine - med grained charnockite forms an intrusion striking 265° approx west. Rather diffuse margin and has selvages.
Intrusion fine grained adj. to the country rock med - coarse grained charnockite some feld porphs → 2 cms. More mafics than at location 326 etc.
Mafics pointing in intrusion ~~[illegible]~~ close pointing at 150° inclined at 30°
Country rock mafics points 55° x 150°
Intrusion about 6 m wide

Sample 331 Country rock 1-3 m to SE of ~~an~~ dyke.
Charnockite med - coarse grained. More mafic than 326 etc. Some irregular veins and pods of coarser material also some mafic segregations
Minor amount of porph. feld.

Small black amphibolite shears similar to at 326 etc. and similar strike but none in immediate vicinity of sample points

NB Major joints appear vertical but most shears have dipping at moderate angles to west ~~the south~~

<u>Sample 330.</u> Slightly weathered

<u>Sample 331</u> Broke along the close joint planes a few inches apart. Fe. staining along joints and some white chemical staining.

Sample 332. Chamosite from N. side of col at foot of ridge. 4894/4095

3 miles $\frac{15}{4}$

FRIDAY 27th FEB 1970

Scullin Monolith SQ 42-43/13

Neill Peak

locality (333) Mtk composed [illegible] - bare
Smales Stn from Scullin Monolith
Photo: ANT76 R.305 9031 R Grid Ref: 4004/4754
at northern end. Well layered rocks.
Main rock types are varieties of garnet
and granulites and some amphibolites with
minor and very, amounts of biotite.
Samples 333 - 334. med. coarse grained.
Bands 10's of metres thick. Thin layers of
marble still = gt 1-2 m thick
Dark bands within the predominantly
light coloured quartzo feldspar and
granulites etc are biotite gneisses often
rich in biotite sample 335 biotite
& no garnet.
✓ Sample 336 is varied, the biotite gneiss
is thin, several bands of fine grained
dark material 1-2 m wide. Thin,
sample 337 has the variety in the

336

333 ch

10 –

337

dark bands contains phenocrysts of garnet > feld + qtz at few mm > 1 cm. Also showed appearance forming bands up to 1 m thick and with 336

Dark bands are up to 4 m thick and cycle 1 cm.

Sample 338 is garnet, acid granite from [illegible] finely crenulated due to comp. bands and also has angle garnet gneiss band 5 cm back & showed [illegible] large green [illegible] up to 1 m. thick

Within each [illegible] there are minor irregular folds and collapsed and the major bands and layers are themselves slightly folded.

General strike 40/145 Major folds 50° + 225° Fold axis

Irregular folds in minor gneiss [illegible] veins [illegible] in [illegible] of "slumping"

Folding in the layering appears to have been refolded – several domes of amplitude 4-5m seen on one ~~band~~ surface from the air

Here from ground the folding appears to have been about the direction of the dips and along strike

One lineation ~~west~~ observed 300 ↖ 10° towards 300°

Mineralogical lineation

lineation itself appears to be folded along axes plunging 12° towards 250° ↙ 250 12

Sample 339. Thermal garnet acid granulite rock. Shearing has produced banding

Southern part of rock is best well sorted mostly light coloured rock with dark folded veins

loc 340.

Scullin Monolith SQ42-43/13 · 4029/4787

Located near W end of Scullin pass.

Photo ANT41 R.17. 7070L

Migmatite and granite gneiss complex

Migmatite area. Dark mafic biotite gneiss and grained granulite with bands and pegmatite folds of gt feld ± mafics 1-2cm and up to 10cm Sample 340

Bands lenses and irregular streaks of acid material

Also large irregular sp. ds veins and masses of gt alg feld granulite

Sample 341 med: coarse grained

Extremely irregular and intimate association of 340 & 341 and other varieties eg 342 gt. granite gneiss & granite

Clear joints 345. 50° · 260°

Large gully → 5m wide strike 50°. contains float of Sample 343 gt. ds. Ocean 2/4 material

[illegible] platy.

Proportions of light & dark near-[illegible] of the [illegible] [illegible] very considerably.

Several anastomosing veins [illegible] some 1 [illegible] 320°

Sample 344 Variety of the mafic granular [illegible]. contains felt. [illegible] felt [illegible]. Porph → 1 [illegible] Streaky, due to mica banding.

Strike irregular but about 240° steeply dip to west

Open folding of [illegible] of [illegible] [illegible] appear 250° [illegible]

To west of [illegible] the main rock type is [illegible] streaky granular [illegible] The mafic [illegible] displaced by the [illegible] of [illegible] irregular [illegible] of the granitic [illegible]

until new landing spot there are only very occasional inclusions up to several metres length of mafic bi. gry. granite. The actual relationship of the granite gneiss to the migmatite complex is diff to determine because of irregular folding, etc

Numerous amphibolite shears striking at various angles mainly 340° × 100° (these results pers. 95 field up to 150 some strike 100°.

The granite gneiss has more felsic and blue quartz ph. Mafics less than 30%

loc 345 Sample 345

Sample 346 Red grained variety occurring as irregular inclusions within 345 not 190 variable

Strike approx 180° dip west

Min. lineation 50° towards 0° 190

Strike foliation 250° × 170°

Sample 347 Porphyroblastic variety coarse grained

Contains stocks and lenses → 1m ~~10cm~~
wide × 20m long of acicular granulite
Many minor pegmatite folds in mesos
and field. polyphase

From air

[illegible] ridges are second major
X-cutting gullies ~~with~~ probably dykes
Extend across whole mountain.
In neck south of major peak banded
rocks appear similar. Is there at
333 etc.
In peak is mass in rock granulite with
more lighter ~~band~~ banded exposed s/c

Northern peak of Heaven Mountain
loc 348 ANT 41. R.17. 8066 Smiths map SQ42-43/13 c
4103/4894
Coarse granite at pegmatite bodies in field
from Length of field → 4 cm

Sample 348
Thermo exposed s/c
Joints 65° & 125° [illegible]
Several 4" peg veins → 1 cm [illegible]
in length [illegible]

[illegible] a few minor [illegible] and bands
[illegible] a few metres of [illegible]
[illegible]
Also occasional [illegible] [illegible] [illegible]
and wispy lenses of quartz [illegible] ± [illegible].

[illegible] shears [illegible] 70° – 80°
Also [illegible] [illegible]

[illegible] 405m. of Murray Monarch
Loc 34a ANT. 41. R17. 7067L. 4091/4779
Banded [illegible] [illegible]. All
bands of [illegible] [illegible] [illegible]
1–2 cm [illegible] up to 10 cm.
Sample 349 Similar to sample 342
Irregular patches [illegible] and bands
of [illegible] coarse [illegible] [illegible] [illegible]
[illegible] Sample 350
Also [illegible] veins → 1–2 [illegible]
of [illegible] of 350
Layering: ⊥ 15 [illegible]
190 [illegible]

Major [illegible] 100° [illegible]

On [illegible] the [illegible] side of [illegible] Geraph
folds [illegible]

N face.

Strongly [illegible] to flat topped hill
suggests folded folds. Open anticlinal
up to 10m

hill a [illegible] similar.

NB Note difference in lithology between
localities 348 & 349

hill 349 is elongated [illegible] a large [illegible]
Nubbin [illegible] (349) [illegible] the [illegible]
itself [illegible] The [illegible]
on a large scale [illegible]
Bands appear [illegible] 4-5m back
Several [illegible] appear [illegible]
veins (350) [illegible] also more [illegible]

themes and veins

On west side of hill a pink coloured aplite vein a few metres wide was observed X cutting gneiss at an angle

$\sin \theta$

$5 \times \frac{\theta}{5}$

$\frac{\sin \theta}{\theta}$

$\theta \to 0$

SUNDAY 1st MARCH | DEPOT PEAK AREA

Loc 351 Stinnes Nuts. S.R 40-41/8 B.

Small low ridge situated about 5 miles & km about 150-160° from Depot Peak

Strike bearing of 50° from o/c to Depot Peak

O/c about 100 yds long elongated about 300° mag

Foot flattened rubbles and rubble except at northern end where o/c is intact

Varieties of gt bi gt field grain. Depot field Standing granite Commercial varieties

Samples 351 · 352

Med. coarse grained

Felt porphy. / aplite / lamp

Strike 200 15 Zone 41: 5680/3333

A few flakes of dark metallic mineral

Sample 353 shows weathering features

Weathers brown/yellow with gt standing out as blue grey

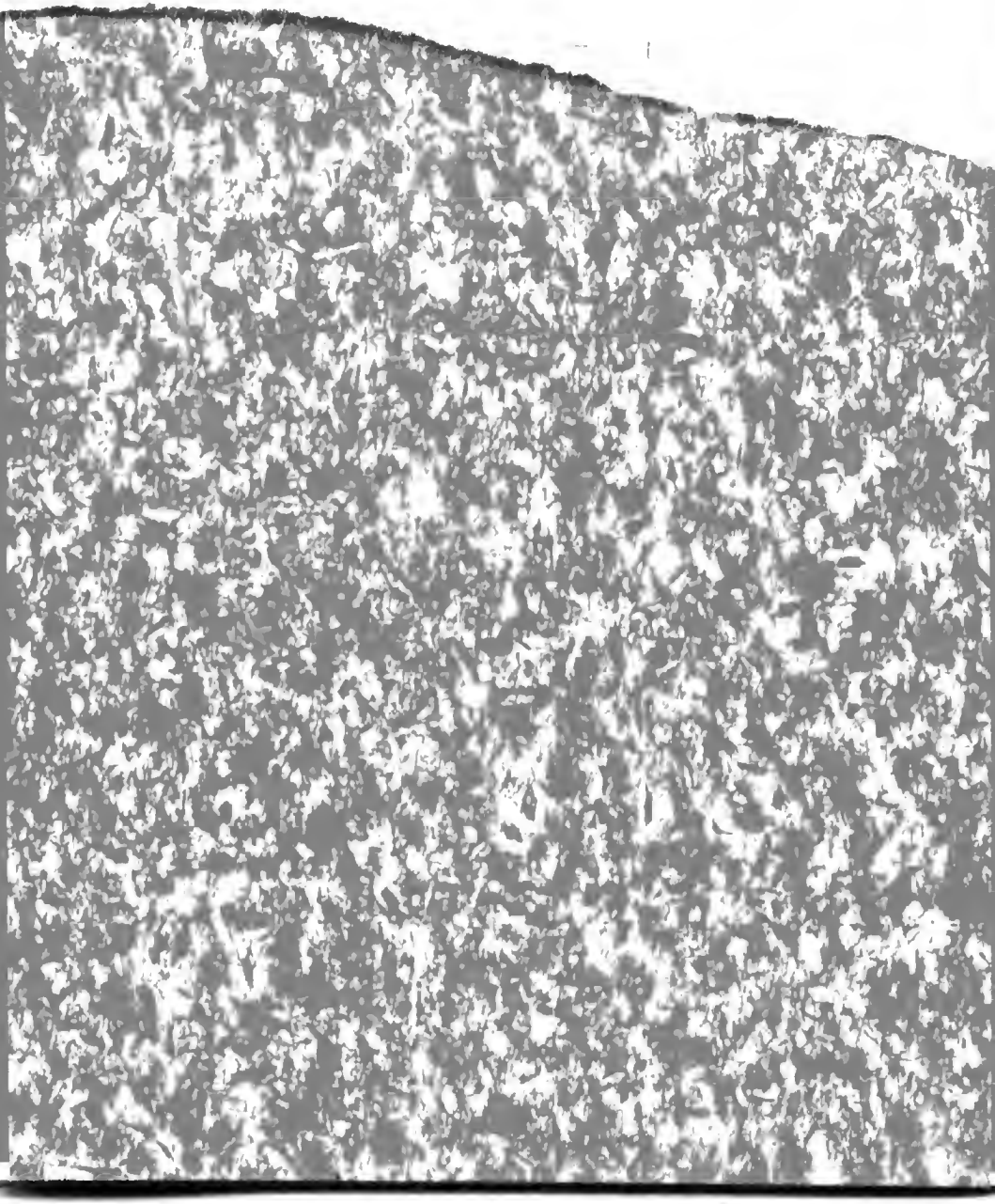
Acid granulite with biotite. Mineral banding

due to segregation of 93° feldspars into layers 1–12 lines wide.

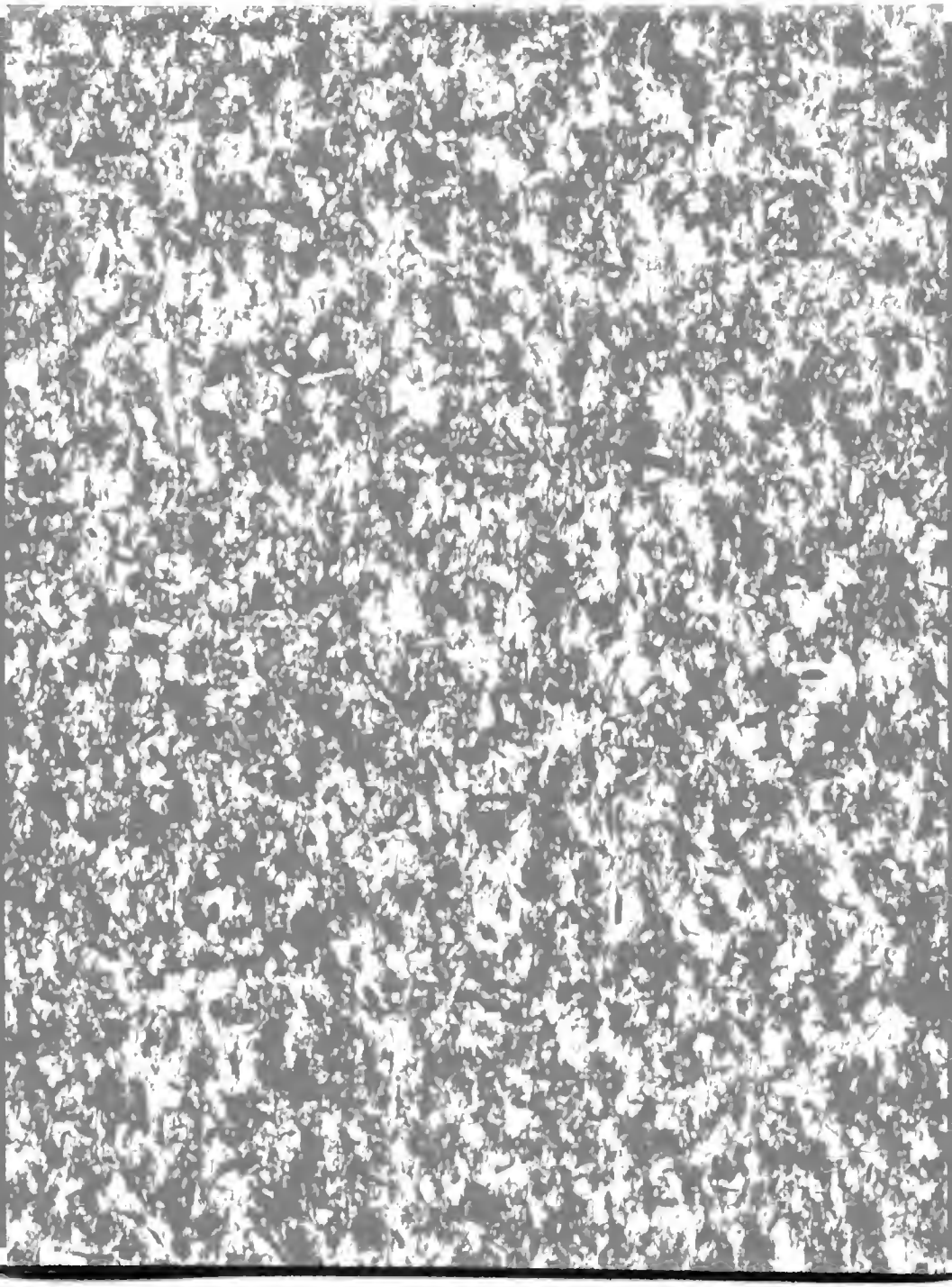
10,000
2,360
12,540

1:100,000

1 mile = 0·6 inches
1 inch = 1·3 miles



10000
2360
30,640

1:100,000

1 mile = 0·6 inches
1 inch = 1·3 miles